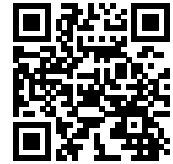
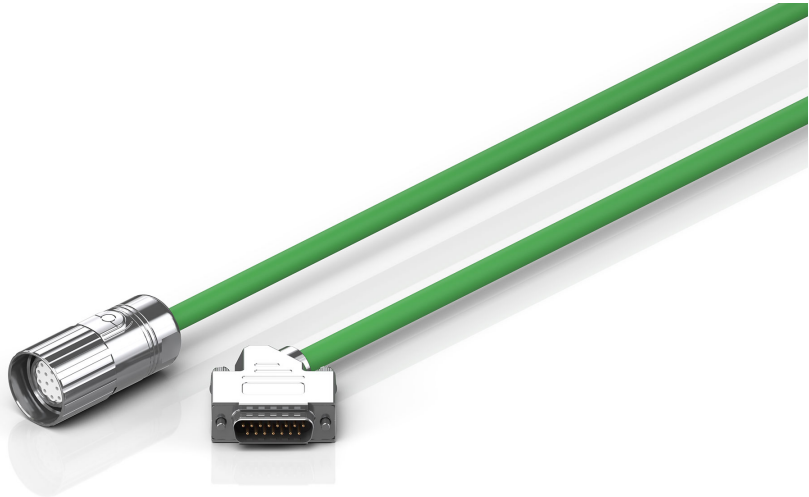


# ZK4510-0000-xxxx | Encoder connection cable 0.14 mm<sup>2</sup> with M23 plug, for fixed installation



M23, plug, straight, female, 17-pin – D-sub, socket, angled, male, 15-pin



## Plugs

Electrical data	Head A	Head B
Rated voltage (signal/24V)	125 V AC/DC	-
Rated current (signal/24V)	7 A max.	-
Rated impulse voltage (signal/24V)	2.0 kV	-
Contact resistance	< 5 mΩ	-
Mechanical data		
Accessories type	Connectors/Cables	Connectors/Cables
Installation size	M23	D-sub
Connector type	plug	socket
Configuration	straight	angled
Contact type	female	male
Number of positions (face)	17-pin	15-pin
Wire termination	crimp connection	solder connection
Mating cycles	500	-
Way of locking	Speedtec®	screw

Weight per piece	0.090 kg (0.1984 lb)	0.055 kg (0.1213 lb)
Body color	metal	metal
Body material	zinc diecast/nickel plated	zinc diecast/nickel plated
Seal	FKM	-
Clamp ring	brass/nickel plated	-
Contact carrier material	PBT, UL 94 V-0	-
Contact material	brass/gold plated	-
<b>Environmental data</b>		
Special features	Max. height for operation 2000 m	-
Ambient temperature (operation)	-20...+130 °C, -4...+266 °F	-40...+120 °C, -40...+248 °F
Protection rating	IP66/67 in screwed condition	IP20
Pollution level	3 (according to VDE 0110/EN61984 part 6.19.2.2)	-
Overvoltage category	3 (according to VDE 0110/EN61984 part 6.19.2.2)	-

## Cable

<b>Electrical data</b>		
Operating voltage	30 V	
Insulation resistance	≥ 20 MΩ*km	
Wire resistance	0.14 mm <sup>2</sup> : ≤ 138.0 Ω/km, 0.5 mm <sup>2</sup> : ≤ 40.0 Ω/km	
Test voltage	1000 V (wire/wire), 800 V (wire/screen)	
<b>Mechanical data</b>		
Cross-section	7 x 2 x 0.14 mm <sup>2</sup> + 2 x 0.5 mm <sup>2</sup>	
Min. bending radius, fixed installation	5 x outer cable diameter	
Weight	81 kg/km (54.424 lb/1000 ft)	
Outer cable diameter	7.6 mm ± 0.3 mm (0.2992" ± 0.0118")	
Conductor material	copper, tinned	
Optical covering factor of shielding	≥ 85%	
Use	fixed installation	
Jacket color	green	
Material jacket	PVC (polyvinyl chloride)	
Wire insulation material	PP (polypropylene)	
Printing color	black	
Torsion angle in °/m	max. ± 30 °/m	
Max. tensile load, dynamic	20 N/mm <sup>2</sup>	
Max. tensile load, static	50 N/mm <sup>2</sup>	

**Environmental data**

Operation temperature range, fixed installation -40...+80 °C, -40...+176 °F

Oil resistance according to UL 1581

Flame-retardant according to IEC 60332-1

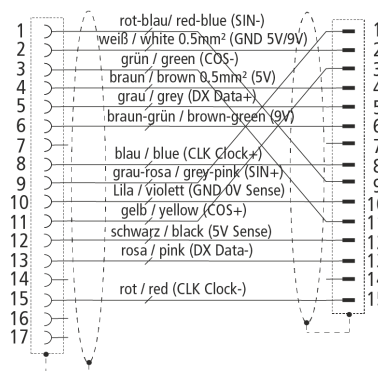
CFC-free yes

Silicone-free yes

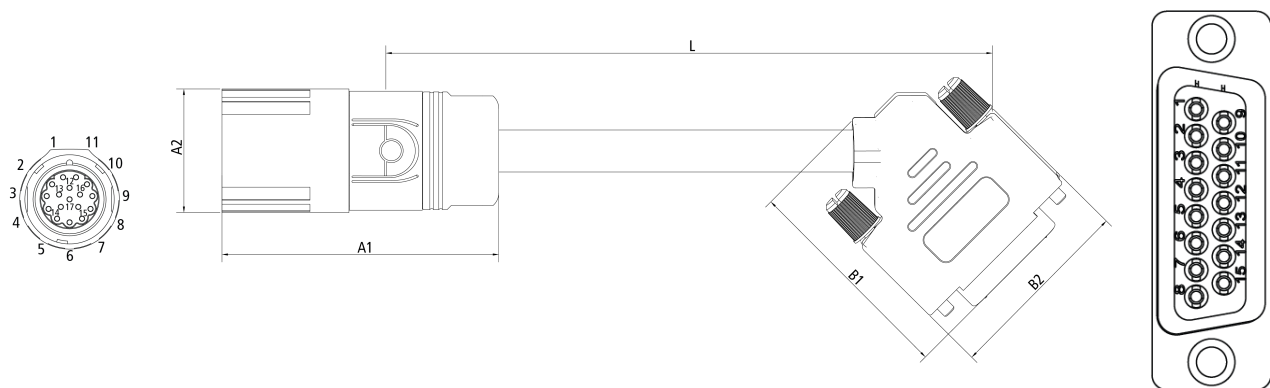
RoHS compliant yes

Approvals RU AWM Style 2502, CSA AWM I/II AB/B 80°C 30V, CE compliant

**Contact assembly**



**Dimensions**



A1	59.00 mm
A2	26.00 mm
B1	46.00 mm
B2	41.00 mm

**Notes**

- Depending on the cable length (L), the following length tolerances apply: ± 2-3 %
- Illustrations similar

- The last three digits of the ordering information is the cable length in decimeters, e.g. ZK4xxx-xxxx-x020 = cable length 2.00 m

Ordering information	Length
ZK4510-0000-xxxx	xxxx = cable length in decimeters
xxxx = 0050	example for 5 m length
sold by the meter, admissible total cable length see documentation of Servo Drive	

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